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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,790	03/19/2004	Masaaki Oka	81707 [PW040003-US]	8890
22342 7590 01/22/2009 FITCH EVEN TABIN AND FLANNERY 120 SOUTH LA SALLE STREET SUITE 1600 CHICAGO, IL 60603-3406				
EXAMINER				
TRUONG, CAMQUY				
ART UNIT		PAPER NUMBER		
2195				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/804,790

Applicant(s)

OKA, MASAOKI

Examiner

CAMQUY TRUONG

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 8/18/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-15 are presented for examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 3, 9, 11, 14, and 15, the phrase "can be" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). The resulting claim does not clearly set forth the metes and bounds of the patent protection desired. The use of similar exemplary language "for example" or "such as" was found to be indefinite in the following cases: Ex parte Hall, 83 USPQ 38 (Bd. App. 1949); Ex parte Hasche, 86 USPQ 481 (Bd. App. 1949); Ex parte Steigerwald, 131 USPQ 74 (Bd. APP. 1961).

All claims that depend upon indefinite claims also stand rejected under 35 U.S.C. § 112, second paragraph.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 15 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 15 recites a computer program. However, the claim fails to assert the program recorded on an appropriate computer-readable medium so as to be structurally and functionally interrelated to the medium and permit the function of the descriptive material to be realized. Since a computer program is merely a set of instructions capable of being executed by a computer without a computer-readable medium needed to realize the computer program's functionality, it is regarded as nonstatutory functional descriptive material.

Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Deng et al. (U.S. 6,938,256 B2) in view of Doyle (U.S. 6,009,455).

As to claim 1, Deng teaches the invention substantially as claimed including the system comprising: an information processing system, clustered by a plurality of information processing devices, wherein:

at least one of the information processing devices (each server, col. 5, lines 37-38) comprising:

metric information management means for storing metric information in an updateable manner, said metric information representing processing metric of a part or whole of other information processing devices excluding the information processing device itself (a system status monitor to collect resource capability information of each server, col. 5, lines 37-38);

load measurement means for measuring the magnitude of the load of information processing requested (incoming requests are analyzed for their respective attributes (resource requirements in terms of CPU availability, memory availability, and bandwidth, (col. 5, line 67 – col. 6, line 3) by the request examiner process, col. 5, lines 44-46);

determination means for determining at least one available device by comparing the magnitude of the load measured by the load measurement means and the metric information stored in said metric information management means, said at least one available device being such that a part or whole of said information processing requested can be distributed and executed (The vector space distance between the requirement vector (116) and capability vectors (136) for any given pairing of request (102) and server (104) represents the degree of mismatch (cost) incurred by the corresponding assignment of the request to that server. If the vectors are identical, the cost is zero, col. 7, lines 11-46);

task assignment means for assigning a task to the available device determined by said determination means (a decision –making algorithm then selects a resource for each request, col. 7, lines 40-44).

4. As to claim 2, Deng teaches said metric information management means includes:

first list management means for acquiring first metric information representative of static processing metric of said other information processing devices to determine at least one available device (collecting resource capability information of each server and ranks the available servers ..., col. 5, lines 38-40 and col. 6, lines 34-40), and storing a first list in a predetermined memory area, said first list being such that the available devices determined are listed (col. 5, lines 49-56); and

second management means for measuring second metric information representative of dynamic processing metric of the available devices listed in said first list, creating a second list such that the second metric information measured is classified and listed per processing metric, sorting the available devices having the second metric information listed in the second list according to the task execution condition to determine at least one available device suitable for each task execution condition, and storing an index list, in which the determined at least one available device is listed, in a predetermined memory area; wherein the second metric information of the available devices listed in the index list is read from said memory area and supplied as said metric information to said determination means (ranking available server, col.6, lines 34-39).

5. As to claim 3, Deng teaches said first list management means uses, as said first metric information, configuration information of the program execution means provided by individual information processing devices and information representative of the type of program that can be executed by said program execution means, and compares said first metric information regarding a plurality of information processing devices, thereby determining the listing order in said first list (col. 5, lines 57-67).

6. As to claim 4, Deng teaches said second list management means sends a processing request to the available device listed in said first list, and receives a response result corresponding to the processing request, thereby acquiring said second

metric information of that available device (col. 7, lines 40-45).

7. As to claim 5, Deng teaches said second list management means weights said second metric information with a coefficient value that is preset according to the type of processing metric, thereby creating said second list per processing metric (computing a vector space distance, col. 8, lines 28-34).

8. As to claim 6, it is rejected for the same reason as claim 2.

9. As to claim 7, Deng teaches said second list management means updates said created second list and said index list more frequently than said first list (the vector space distance update to an element in a cost matrix initialized at the start of the predetermined time interval, col. 8, lines 28-34) .

10. As to claim 8, Deng teaches said plurality of information processing devices are interconnected via a network, and said second list management means sends said processing request via said network, and receives a response result corresponding to the processing request via said network (Fig.3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deng et al. (U.S. 6,938,256 B2) in view of Doyle (U.S. 6,009,455).

12. As to claim 11, Deng teaches an information processing device for executing information processing such that the magnitude of its load is unpredictable, said information processing device comprising:

program execution means is partitioned into a plurality of clusters (distribute the requests to one of several server group, col. 2, lines 18-25); and

metric information management means for storing metric information in an updateable manner, said metric information representing processing metric of each of the clusters of said program execution means (a system status monitor to collect resource capability information of each server, col. 5, lines 37-38);

load measurement means for measuring the magnitude of the load of the information processing requested devices (incoming requests are analyzed for their respective attributes (resource requirements in terms of CPU availability, memory

availability, and bandwidth, (col. 5, line 67 – col. 6, line 3) by the request examiner process, col. 5, lines 44-46);

determination means for determining at least one available device by comparing the magnitude of the load measured by said load measurement means and the metric information stored in said metric information management means, said at least one available cluster being such that said information processing requested can be distributed and executed (The vector space distance between the requirement vector (116) and capability vectors (136) for any given pairing of request (102) and server (104) represents the degree of mismatch (cost) incurred by the corresponding assignment of the request to that server. If the vectors are identical, the cost is zero, col. 7, lines 11-46);

task assignment means for assigning a part of said information processing requested to each of said plurality of clusters determined by said determination means (a decision –making algorithm then selects a resource for each request, col. 7, lines 40-44).

13. Deng does not explicitly teaches output means for combining execution results and outputting the combined results from the respective clusters assigned by said task assignment means. However, Doyle teaches output means for combining execution results and outputting the combined results from the respective clusters assigned by said task assignment means (the result generated for each segment are combined by the application-specific job output, col. 3, lines 17-24).

14. It would have been obvious to one of ordinary skill in the art at the modify the teaching of Deng by incorporating the teaching of program execution means is partitioned into a plurality of clusters; and output means for combining execution results and outputting the combined results from the respective clusters assigned by said task assignment means as taught by Doyle because this allows the combined result is output for storage or display for further use.

5. As to claims 9-10, Deng teaches at least one of said plurality of information processing devices is configured so that: said program execution means is partitioned into a plurality of clusters (distribute the requests to one of several server group, col. 2, lines 18-25);

Doyle teaches the operating status of each cluster can be notified to other information processing devices (available of client, col. 4, lines 16-20).

16. As to claim 12, Doyle teaches processing request execution means for executing required information processing corresponding to a processing request issued by another information processing device, and returning the execution result thereof, together with a transmission start time to said another information processing device and notification means for notifying the metric information stored in said metric information management means to other information processing devices (col. 12, lines

35-50).

17. As to claim 13, Deng teaches each of said plurality of clusters further comprises a processor (computer server, col. 2, lines 24-25).

18. As to claims 13-15, they are rejected for the same reason as claim 11.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAMQUY TRUONG whose telephone number is (571)272-3773. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng Ai An can be reached on (703)305-9678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

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Customer Service Representative or access to the automated information system, call
800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VAN H NGUYEN/
Primary Examiner, Art Unit 2194

Camquy Truong
Examiner, Art Unit 2195
January 17, 2009